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ABSTRACT

The nature of and problems with words of more than one syllable are discussed in this paper, and strategies for teaching and reading such words are suggested. It is postulated that the major problem in reading words of more than one syllable is stress and its effect on vowel pronunciation. It is also reasonable to assume that words become more difficult to read as they become longer. In words of more than one syllable there is less consistency in their spelling-to-sound correspondences. A strategy is included for the ordered introduction of two-syllable words in reading in the following six steps: (1) one-syllable words with one-syllable inflectional suffixes, (2) two-syllable compounds with first syllable primary stress, (3) two-syllable words with both syllables receiving stress and thus both vowels conforming to previously learned spelling-to-sound correspondences, (4) two-syllable words with the common endings "y" and "le", (5) two-syllable words with stress on the first syllable and an unstressed vowel in the second, and (6) steps 2, 3, and 5 with primary stress on the second syllable. (TS)

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Bruce Cronnell

ABSTRACT

The extension of "phonics instruction" to words of more than one syllable encounters difficulties. Alternative strategies for teaching and reading such words are presented.

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READING WORDS OF MORE THAN ONE SYLLABLE*

Bruce Cronnell

While phonics instruction usually emphasizes one-syllable words, more complex strategies are needed to read longer words. This paper discusses the nature and difficulty of reading words of more than one syllable, and suggests procedures for systematically teaching them, using regularities in the language and in English spelling-to-sound correspondences. (The view of spelling-to-sound correspondences underlying this paper is found in Berdiansky, Cronnell, & Koehler, 1969; Cronnell, 1971; Venezky, 1967, 1970.)

Problems in Reading Multisyllable Words

An immediately obvious difficulty in reading words of more than one syllable is their increased length: it is reasonable to assume that words become more difficult to read as they become longer (although there are undoubtedly exceptions). While longer words require more processing by the reader, this should not cause undue reading difficulty if word length is gradually increased. Pronouncing words of extreme length--perhaps over five syllables--may present difficulties even for skilled readers, but such words are, fortunately, rare (cf, Zipf, 1935).

The major problem in reading words of more than one syllable is stress and its effect on vowel pronunciation. Most multisyllable words have one or more unstressed syllables containing unstressed neutral vowels. (The pronunciation of unstressed vowels is generally /ə/ or /ɪ/[1] with considerable idiolectal and dialectal variation; see Francis, 1958; Hubbell, 1950.) The problem is basically thus: correct pronunciation of vowels depends on knowledge of stress, but stress is poorly indicated in the orthography.

In words of more than one syllable there is also less consistency in their spelling-to-sound correspondences. Whereas irregular one-syllable words generally deviate quite unpredictably from the common correspondences and must be learned as sight words, there are large classes of multisyllable words that vary in "regular" ways from the general correspondences. For instance, a written vowel commonly corresponds with its long (letter-name) sound when followed by a consonant and another vowel, e.g., baby, meter, pilot, notice, unit.

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[1]Symbols between slashes indicate pronunciation.

However, this correspondence has many exceptions, when the pronunciation is a short vowel, e.g., cabin, metal, city, proper, study. This common irregularity may present considerable stress difficulty.

Stress Placement in Multisyllable Words

The most comprehensive treatment of English stress is found in Chomsky and Halle (1968); however, because of its extreme complexity, the work does not offer much guidance for teaching stress placement to children. Chomsky and Halle describe what they believe is the native speaker's competence, but because the words used in their description are quite rare in children's (and to some extent, adults') vocabularies, there is some question whether the Chomsky and Halle stress rules are actually within the competence of beginning readers. Thus, it appears that "reading acquisition might be more profitably viewed as part of...the maturational development of the 'sound pattern' of English" (MacDonald, 1969, p. 183); instead of employing competence, reading instruction develops competence in the use of English stress patterns.

While English orthography does not indicate stress, there are some simple generalizations about stress placement that are possible at this point:

1) In two- and three-syllable words, the first syllable is most commonly stressed, e.g., háppy, cárnival.[2]

2) In words of three or more syllables there is often an alternation between stressed and unstressed syllables, e.g., álphabèt, tònsilítis.

3) Words ending in VCe or VV(C) are often stressed on the last syllable, e.g., amáze, èngineér.

4) The addition of certain derivational suffixes may affect stress and pronunciation, e.g., dónate-donátion; áctive-actívity.

At present, no other generalizations are suggested for teaching purposes. Indeed, it is possible that these generalizations may be more appropriate to the organization of instruction than to use in instruction, at least at the beginning stages.

Strategies for Teaching Two-Syllable Words

A strategy for the ordered introduction of two-syllable words in reading was suggested by Desberg and Cronnell (1969) and is given here in slightly revised form:

[2] Primary stress is indicated ´, while secondary stress is indicated `; unstressed syllables are not marked.

1) one-syllable words with one-syllable inflectional suffixes, e.g., stopping, wishes;

2) two-syllable compounds with first syllable primary stress, e.g., báthròbe, súnsèt;

3) two-syllable words with both syllables receiving stress (primary stress on the first syllable and secondary stress on the second) and thus both vowels conforming to previously learned spelling-to-sound correspondences, e.g., cóstùme, áccènt;

4) two-syllable words (first syllable stressed) with the common endings y and le, e.g., háppy, bóttle;

5) two-syllable words with stress on the first syllable and an unstressed vowel in the second, e.g., túnnel, bóttom;

6) steps 2, 3, and 5 with primary stress on the second syllable, e.g., (2) hèrsélf, mỳsélf; (3) pàstél, tròmbóne; (5) agrée, commánd.

Using these steps, beginning readers will be gradually introduced to the concepts of syllables, stress, and unstressed vowels.

Step 1 should cause no difficulty, since pronunciation of the suffixes -(e)s and -(e)d is phonologically determined and that of -ing grammatically determined (e.g., given the sequence "he is play__," the only thing that can follow is -ing. (For discussion of the use of context in reading see Goodman, 1967.)

Step 2 merely combines words, most of which have been used in previous instruction. The major instructional problem here (as in Step 1) is to teach children to recognize the individual parts. This is probably not a great problem, except in words such as hothead, which must be interpreted as hot + head and not ho + thead.) While Step 2 might precede Step 1, the importance of inflectional suffixes in reading suggests the primacy of Step 1.

In Step 3, which is similar to Step 2 but with indivisible words, both syllables are stressed, with primary stress on the first syllable and secondary stress on the second. Since both syllables are stressed, the vowels can be pronounced according to previously learned spelling-to-sound correspondences extended to two-syllable words.

Step 4 introduces new spelling-to-sound correspondences in the second syllable, but uses first syllables similar to those in Step 3. The common endings y and le do not seem to present serious learning problems. On the other hand, Step 5 is much more difficult since it involves five vowels (a, e, i, o, u) and a variable and unpredictable pronunciation.

Steps 1 through 5 use words with first syllable stress; this gives emphasis to the most common stress pattern for two-syllable words. Step 6 introduces an additional variable: stress on the second syllable. In the repetition of Steps 2 and 3, there should be few problems, although, once again, Step 5, with unstressed vowels, will be difficult.

Strategies for Reading Two-Syllable Words

In the previous section, steps have been outlined for teaching two-syllable words. The strategies that readers must use to decode these words are similar:

A. (cf, Steps 1 and 2) Check the word to see if there is a base plus suffix or a compound of two words.

B. (cf, Steps 3 and 4) If A does not apply, use regular vowel spelling-to-sound correspondences.

C. (cf, Step 5) If B does not result in a known word, use an unstressed vowel in the second syllable.

D. (cf, Step 6) If C does not result in a known word, use an unstressed vowel in the first syllable (with the vowel sound in the second syllable as in B).

Use of the above heuristic strategy should result in the correct decoding of words; while this is a trial-and-error method, it seems to be the best available, given the nature of English orthography, and is probably similar to the method used by skilled readers. (See Fig. 1 for examples illustrating this strategy of identifying words.)

As noted above, the pronunciation of a single vowel letter followed by a consonant and another vowel is most commonly a long sound, but also frequently a short sound. Thus when encountering a vowel in this environment the most frequent pronunciation (a long vowel) should be tried first; if this does not result in an appropriate word, then a short vowel should be tried, e.g.,

	baby	city
long vowel	yes: /bébi/	no: /sayti/ is not a word
short vowel	_____	yes: /síti/

An alternate strategy can also be suggested. Since short vowels are the most frequent pronunciations for single vowel letters, the following approach would be applicable to even more words:

Fig. 1. Use of proposed identification strategy for two-syllable words.

	bathtub	singing	accent	bantam	attack
Steps					
A.	yes: /bǽθtə̀b/	yes: /síŋɪŋ/	no	no	no: at + tack is not a compound
B.	_____	_____	yes: /æksent/	no: /bæntæm/ is not a word	no: /ætæk/ is not a word
C.	_____	_____	_____	yes: /bǽntəm/	no: /ǽtək/ is a word (attic), but would be ruled out by context
D.	_____	_____	_____	_____	yes: /ətǽk/

a) Try a short vowel pronunciation of the first vowel in a two-syllable word (unless it is followed by r, when special vowel plus r correspondences should be applied; this is really an earlier step).

b) If (a) does not result in an appropriate word, use a long vowel pronunciation.

For example:

	happy	baby	city
a)	yes: /hæ̀pi/	no: /bæbi/ is not a word	yes: /sɪ́ti/
b)	_____	yes: /bèbi/	_____

If use of neither of these strategies results in an appropriate word, it probably means that the vowel is unstressed, which is the next pronunciation to try (as in Step D above).

Strategies for Teaching Words of Three or More Syllables

As the length of words increases, the number of words and the frequency of their use decreases (Zipf, 1935). Thus, although longer words may be more difficult to decode, they occur much less frequently. The steps in teaching words of three or more syllables are essentially the same as those outlined above for two-syllable words. The procedure is to first teach compounds and affixed forms, followed by base words arranged by stress patterns and by common spelling elements.

The Teaching of Affixes

Next to compounds, affixed forms are probably the easiest to teach and learn among words of more than one syllable. Very often they are simply combinations of base plus affix (e.g., yellowish, unclear); in many cases pronunciation of a suffix is automatically determined (e.g., dogs, cats); sometimes their use is grammatically or semantically determined (e.g., -ing as indicated above).

However, not all affixes are so simple: spelling and/or pronunciation changes often accompany affixation, although generally only when suffixes are involved. Some of these kinds of changes are:

a) Suffixation with a change in spelling, e.g., hit-hitting, apply-applied, advise-advisor.

b) Suffixation with no spelling change, but with a change in pronunciation, e.g., act-action, confess-confession; a change in stress would be in this category.

c) Suffixation with both spelling and pronunciation change, e.g., athlete-athletic, donate-donation; rather drastic spelling and/or pronunciation changes may be involved, e.g., conclude-conclusion, oppose-opposition.

In reading affixed forms, it is necessary to know what the base word is. For example, medial ie is generally pronounced /i/ (e.g., field); the word applied will be misread as /əplɑɪd/ unless it is correctly recognized as apply plus ed. Thus it is suggested that affixed words be taught using word pairs to contrast base and affixed forms, e.g.,

act - action
adopt - adoption
protect - protection

describe - description
inscribe - inscription
subscribe - subscription

able - ability
stable - stability

conclude - conclusion
erode - erosion
explode - explosion

This approach (contrasting bases and affixed forms) would either capitalize on the reader's linguistic competence (Chomsky and Halle, 1968), help develop this competence (MacDonald, 1969), or both.

Using "Pseudo-Affixes" in the Teaching of Words of More than One Syllable

The term "pseudo-affixes" has been coined to describe those commonly recurring word parts that look like suffixes and prefixes, but do not act as such, grammatically and semantically, e.g., the com- (/kəm/) in commit, communion, and communicate. In general, these pseudo-affixes were historically affixes (e.g., Latin com- < cum 'with'), but they have lost their independent status. In some cases, true affixes and pseudo-affixes share the same form, e.g., rename/repair, re-form ("form again")/ reform. In teaching words of more than one syllable, pseudo-affixes can be taught either as separate sets or grouped with true affixes. This approach should permit greater facility in the identification of words.

Conclusion

This paper has described the nature of and problems with words of more than one syllable, and has suggested strategies for teaching and reading such words. The use of these strategies should provide children with greater ability to decode the words they encounter in their reading.

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